

Application No. 10/701,509 (McInnes)
Reply to O.A. of Jan 26, 2007

Amendments to the Claims

The following listing of claims will replace all prior versions, and listings, of claims in the application:

CLAIMS:

1. (CURRENTLY AMENDED) An image distortion method comprising the steps of:

- (a) maintaining in computer memory a set of base data values representing an image to be subjected to a transformation function;
- (b) calculating a non identity approximation of the transformation function;
- (c) retrieving from computer memory one or more of the base data values;
- (d) calculating an intended magnification value (M_e) [(M_s)] for one or more of the retrieved base data values;
- (e) calculating an estimated magnification value (M_s) [(M_e)] for one or more of the retrieved base data values;
- (f) storing in computer memory the estimated magnification values as a set of transformed data values representing the transformed image;
- (g) calculating a [the] difference (M_E) between the estimated [intended] magnification value(s) and the intended [estimated] magnification value(s); and
- (h) repeating steps (c) to (g) until the difference M_E is less than a predefined threshold.

2. (CURRENTLY AMENDED) The [An] image distortion method as claimed in claim 1 wherein the step of calculating the [an] non identity approximation of the transformation function further comprises the steps of:

- (a) defining an approximating function $G(p)$ to approximate the transformation function, the approximating function including one or more parameters;
- (b) defining an initial value of one of the parameters (p);
- (c) calculating a [the] maximal value of the derivative of the approximating function $G(p)$ using the parameter p ;
- (d) calculating a [the] maximal intended magnification value using the parameter p ;

Application No. 10/701,509 (McInnes)
Reply to O.A. of Jan 26, 2007

- (e) calculating a ~~the~~ difference between the maximal value of the derivative of $G(p)$ and the maximal value of the intended magnification value;
- (f) adjusting the value of the parameter p ; and
- (g) repeating steps (c) to (f) until the difference between the maximal value of the derivative of $G(p)$ and the maximal value of the intended magnification value is less than a pre-defined threshold.

3. (CURRENTLY AMENDED) An image distortion system for subjecting a set of base data values representing an image to a transformation function, the system comprising:

- a transformation approximation component configured to calculate an non identity approximation of the transformation function;
- an intended magnification calculator configured to calculate an intended magnification value (M_i) [~~(M_s)~~] for one or more of the base data values;
- an estimated magnification calculator configured to calculate an estimated magnification value (M_e) [~~(M_e)~~] for one or more of the data base values; and
- a convergence measurer configured to compare the difference (M_E) between the estimated [~~intended~~] magnification value and the intended [~~estimated~~] magnification value (M_E) with a threshold value.